

Claims

1. Method for reducing the power consumption (IB) of a mobile data memory (DT) for contactless data transmission (SDAT, LDAT) with a read/write device (SLG), which mobile data memory (DT) includes at least one energy store (BAT) and consumers (EMP, SEND, Q1, Q2, MEM), the data memory (DT) being supplied, at least during a cyclic (T) inactive idle mode (If1, IR), with a first clock frequency (f1) from a first oscillator (Q1), and being supplied, at least during a cyclic polling time (TA), with a second, higher clock frequency (f2) from a second oscillator (Q2) for data reception.

2. Method according to claim 1,

15 wherein

the higher clock frequency (f2) is used for data demodulation of a received signal (ES).

3. Method according to claim 2,

20 wherein

a level of the received signal (ES) is measured within the cyclic (T) polling time (TA) and the received signal (ES) is then data demodulated if a minimum level is present.

25 4. Method according to claim 3, wherein

the second clock frequency (f2) is switched off again if a minimum level is not present.

5. Method according to any one of the preceding claims 2 to 4,

30 wherein

the data demodulation of the received signal (ES) is ended if the demodulated read data (LDAT) is invalid.

6. Method according to claim 5,

wherein

the second clock frequency (f2) is switched off again if invalid read data (RDAT) is present.

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7. Method according to any one of the preceding claims 2 to 6, wherein,

at the start of the polling time (TA) and prior to the data demodulation of the received signal (ES), the second clock frequency (f2) is switched with an initial transient time (TV).

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8. Method according to any one of the preceding claims,

wherein

15 the second clock frequency (f2) is a multiple of, in particular at least 5 times, the first clock frequency (f1).

9. Method according to claim 8,

wherein

20 the second clock frequency (f2) is 40 times the first clock frequency (f1).

10. Method according to any one of the preceding claims,

wherein

25 the first clock frequency (f1) is used for transmission of the data (SDAT).

11. Use of the method according to any one of the preceding claims in an identification system based on the ISO/IEC 18000 standard for operation in an ISM frequency band.

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12. Use of the method according to claim 11,

wherein

the identification system is operated in an ISM frequency band

of 2.45 GHz.

13. Mobile data memory (DT) for transmitting data to a
read/write device (SLG), which mobile data memory (DT) includes
5 at least one antenna (SA,EA), a data receiver (EMP) and a data
transmitter (SEND) connected thereto, an energy store (BAT) for
supplying energy, a first oscillator (Q1) with a first clock
frequency (f1), in particular for a timer (TIMER) and for the
data transmitter (SEND) of the data memory (DT), a second
10 oscillator (Q2) with a second higher clock frequency (f2), in
particular for the data receiver (EMP), and a control unit (C)
which intermittently connects (S1,S2) circuit parts (EMP,SEND)
of the data memory (DT) to the energy store (BAT), and which,
at least during a cyclic (T) polling time (TA), connects (S3)
15 the second oscillator (Q2) to the energy store (BAT).

14. Mobile data memory (DT) according to claim 13,
wherein
the data receiver (EMP) includes a data demodulator (DM) for
20 data demodulation of a received signal (ES) from the antenna
(EA), which data demodulator (DM) is connectable (S1) from the
control unit (C) to the energy store (BAT).

15. Mobile data memory (DT) according to claim 14,
25 wherein
the data receiver (EMP) includes a level detector (PD) for
measuring the level of the received signal (ES), which level
detector (PD) is connectable (S2) from the control unit (C) to
the energy store (BAT).

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16. Mobile data memory (DT) according to any one of claims 13
to 15, which has electronic switching means (S1-S3) that can be
activated by the control unit (C).

17. Mobile data memory (DT) according to any one of the preceding claims 13 to 16, which has a timer (TIMER).

5 18. Mobile data memory (DT) according to any one of the preceding claims 13 to 17,

wherein

the oscillators (Q1,Q2) are quartz oscillators.

10 19. Identification system (IS) having a read/write device (SLG) and at least one mobile data memory (DT) according to any one of claims 13 to 18.